

# LEICA *photography*

SPRING 1950

25¢

NO. 9 VOL. 3



**FIRST PRIZE** Winning picture in  
the Leica Centennial Competition of 1949.  
By Howard E. Foote, New York





*"Don't use a Leica and a long focus lens" he says. "Creep up on them in disguise. And now I'm married to those three cows down the beach."*

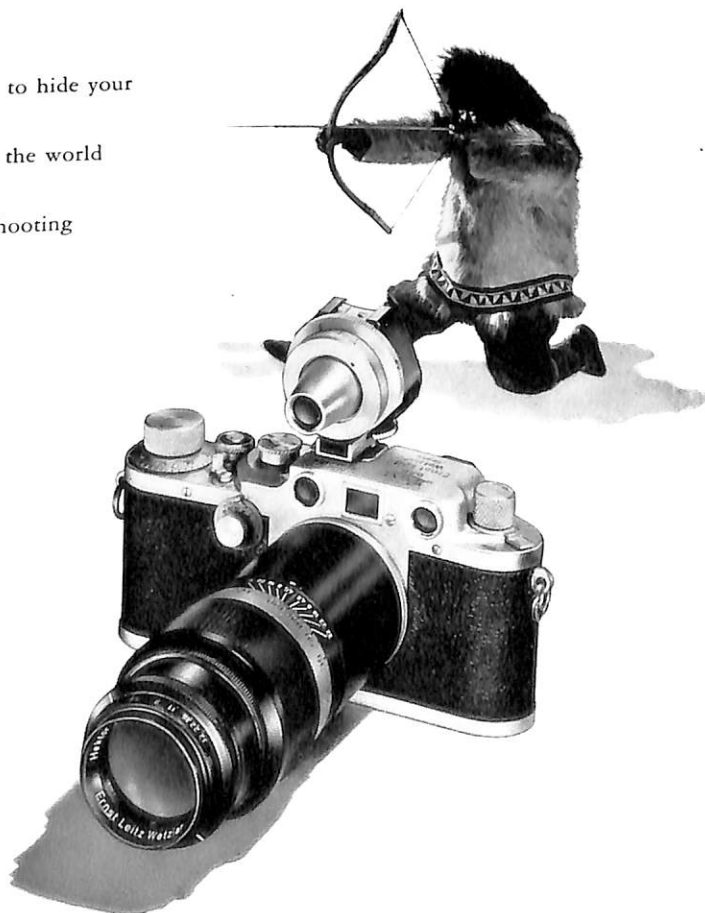
With a Leica and a lightweight long focus lens there's no need to hide your  
hide under a hide, or light under a bushel. Explorer-photographers the world  
over agree that there's nothing like a Leica and a long focus lens for shooting  
*Odobenus rosmarus* and *genus homo*.

Why wed Walri? . . . when you can marry a long focus lens to your Leica in  
perfect safety *and* get the prize pictures you want, without punishment.

*Leica* \*

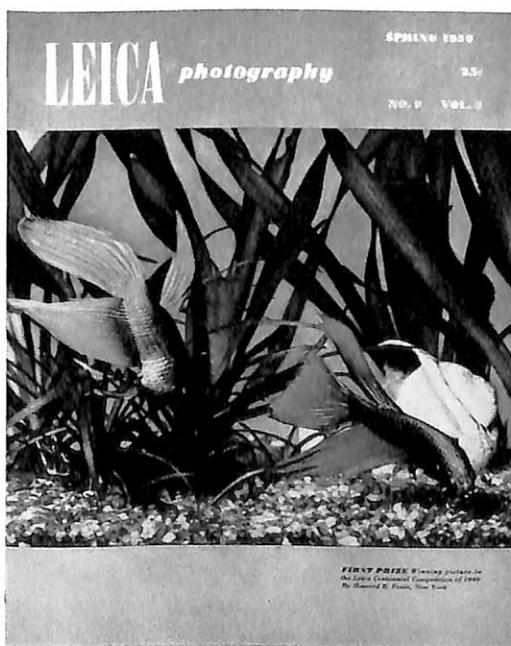
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BETTA FISH . . . Leica Camera color photograph by Howard E. Foote, New York. First prize winner in the final section of the Grand Leica Centennial Competition of 1949. Made with a Leica IIIc on the Focalslide; with Elmar 90mm. coated lens at F:18; press 40 bulb in Leitz Synchronized Flash Unit, Model VIIa, at 1/40 second; Kodachrome Film. Four-color plates by the Aetna Photo Engraving Co., from a 16" x 20" color print by Evans-Peterson, New York.

LEICA PHOTOGRAPHY is published by E. Leitz, Inc., at 304 Hudson Street, New York 13, N. Y., as a quarterly magazine, price 25 cents. Copies are sent free of charge to all registered Leica Camera owners residing within the United States of America and U. S. Territorial Possessions. A subscription fee of \$1.00 per year is charged to non-owners of Leica Cameras in the U. S. A., and \$2.00 to owners or non-owners elsewhere. Single copies are on sale at photographic dealers' stores, or direct from the publishers. Advertising rates will be quoted on request, and we reserve the right to select advertisements. The Editor will be pleased to consider original articles and photographs on Leica Camera photography. All manuscripts should be accompanied by stamped, self-addressed return labels. Copyright 1950 by E. Leitz, Inc. Printed in U.S.A.



# COLOR PHOTOGRAPHS AND THEIR REPRODUCTION ON PAPER

by Douglas A. Spencer, Ph.D., F.R.I.C., F.I.B.P., Hon., F.R.P.S.  
Past President, Royal Photographic Society, well-known color photographer  
and foremost color technician of Kodak Ltd., London, England

There are now available in the U.S.A. at least thirty different types of material for producing color photographs. These different forms comprise every feasible permutation by which a color result based on three-color theory can be produced, but they do not overlap in function as much as

might be supposed, since each type of material shows to best advantage in a limited number of fields of application—and color photography is entering new fields every day.

Color photographs are available as transparencies which

PLATE 1. The Pope gives audience

*Picture Courtesy "Daily Sketch," London, England*





are easier to make than to reproduce and as color prints on paper which are easier to reproduce than to make. The processes themselves can be divided into four main classes:

**1. Color films which, after exposure by the photographer, are sent to elaborately equipped processing stations where they are turned into positive color transparencies on film.** An example is "Kodachrome," available as sheet film, 35mm., film for miniature cameras, and 16mm., and 8mm., sub-standard cine film. The recently introduced 35mm., Ilford Color film is of this type. In these processes the three records of the primary color components, which are required in all practical color processes, are recorded on three separate emulsions coated one above the other on the same support. The resulting "integral tripack" is so processed that the images in the three superposed layers are each converted into a positive image in the appropriate color.

**2. Color films which the photographer can process himself.** "Ektachrome" (Kodak), "Ansco" (Anso), "Gevacolor" (Gevaert) and "Agfacolor" (Agfa) are integral tripacks of the general form described in (1) but do not involve the elaborate processing procedure necessary with "Kodachrome"—merely care and patience on the part of the photographer. "Dufaycolor" (Dufay Chromex) is an interesting member of this class in that it is the sole surviving additive color still process. In "Dufaycolor" the three-part images are produced side by side on one emulsion surface through a mosaic of microscopic primary-colored filters.

**3. Color prints on paper.** In the color-print processes most widely used by professional photographers—namely, Carbro (Autotype Company) and Dye Transfer (Kodak), the yellow, magenta, and blue-green part positive images are separately prepared and superimposed on paper. These part images are prepared from three so-called separation negatives, which, with still-life subjects, are made by successive exposures in an ordinary camera, or, with living subjects, simultaneously in a so-called one-shot camera. The latter, however, is an expensive piece of precision equipment which is rapidly making its way to the museum shelf, and nowadays the more usual practice is to make the separation negatives from color transparencies by treating the latter as a still-life object and rephotographing it to produce the separation negatives.

Color prints can also be produced by direct printing in one operation from color transparencies. When the transparency is a positive ("Kodachrome," "Ansco") the color print is, in effect, a copy of this transparency produced on an integral tripack coated on paper, and as yet the results are on the whole inferior in quality to three-color prints made from direct separation negatives.

When the integral tripack camera material is developed to a negative in complementary colors ("Kodacolor") the color print is a positive print rather than a reversal copy, and the quality of the result should, in theory, be higher. However, "Kodacolor" is the color equivalent of the conventional photo-finisher's black and white system in that the prints are produced on mass production lines from roll-film negatives, most of which are exposed in cheap cameras.

Understandably enough, therefore, the average result, judged by professional standards, is of somewhat mediocre

quality. This has proved no drawback in the markets in which "Kodacolor" has so far been made available.

This is fortunate, for the experience which is being gained in producing relatively cheap color snapshots on paper is being turned to good account in the researches now in progress on methods for making prints of this type but of a quality suitable for commercial, industrial, and scientific use. "Ektacolor" film, for example, is a highly ingenious form of integral tripack, which is directly descended from the amateur "Kodacolor" negative-positive system. "Ektacolor" not only records the red, green and blue components of the subject in accordance with the conventional three-color system of color photography, but at the same time it produces in the negative two colored masking images. These colored masking layers automatically introduce the necessary corrections which must be made if any three-color process of photography is to give accurate hue rendering. It would have seemed unbelievable a few years ago that such an intricate series of steps could all be reduced, from the photographer's point of view, to a procedure in which he merely exposes and then develops the film to a negative.

In the "Ektacolor" negative, objects are rendered as negatives as regards light and shade and in their complementary colors. When, therefore, the negative is printed on to similar material coated on paper the familiar reversal of tone rendering is accompanied by a corresponding reversal of hues, and a print in natural colors obtained. Alternatively, the three separation positives or negatives required for the older forms of color printing can be obtained by rephotographing this negative through color separation filters in the conventional manner, and color retouching of the type usually given is unnecessary.

**4. Colored prints made from monochrome photographs.** Hand tinting is, of course, the oldest method of producing a colored photograph on paper. The conventional methods by which black and white or sepia tone prints are worked up with dyes, water colors, crayons or oil paints require considerable manual skill and artistic judgment if the result is to challenge comparison with a natural color photograph on paper. Recently, however, a greatly improved system—"Flexichrome" (Kodak) makes it possible for anyone to produce with a minimum of practice colored photographs which can only be distinguished with difficulty from first class three-color Carbro or Dye Transfer Prints. Making the parent black and white print from a color transparency which is subsequently used as a guide to coloring is likely to become a very popular method among both professional and amateur photographers who require color prints on paper. Success, however, hinges on faultless darkroom technique in making the black and white print and here the miniature camera photographer's necessarily high standard of workmanship will stand him in good stead.

Leica color pictures can be made by one or more of the processes mentioned in all four classes above. Generally speaking, however, the making of first class color prints from 35mm. color transparencies or separation negatives is regarded as something of a *tour de force*—chiefly because this is usually attempted without the proper equipment.

As an amateur photographer, this has never concerned

*Continued on page 32*



# COLOR PRINTS FROM LEICA TRANSPARENCIES

by Glen Peterson, Evans-Peterson Color Laboratory,  
Forest Hills, N. Y.

**W**e have all enthused over the wonderful beauty of our projected Leica color slides and often wished we could have a color print of our favorite shot. Commercial color prints are available but they seldom show the full beauty of the transparency. It is possible to procure prints that are a faithful reproduction of the transparency, although their cost places them out of the range of most of our budgets. But anyone who is proficient at normal black and white negative processing and print-making should be able to follow the methods outlined in this article and finish up with a color print they will be proud to hang on their walls.

For the average amateur, the Eastman Dye Transfer Process is probably the best method of color printing as the equipment necessary is usually found in most dark-rooms. The procedures may be roughly broken into four jobs; they are, making the masks, making the separation negatives, then the matrices and finally "pulling" the color print. The first two steps will be explained with an idea of endeavoring to make all points clear to even the beginner.

Three separation negatives are made by exposing through the transparency on panchromatic film with light filtered through red, green and blue filters. Before we do this, however, we will make masks. Masks are "weak" negatives used between the transparency and the separation negative being exposed. The masks are necessary in order to obtain the full range of the transparency, from highlight to shadow, on the final paper print, and to insure that the colors print clean and strong. The highlight mask prevents the highlight tones from "flattening out" and makes for better highlight-value separation. The principal masks reduce contrast generally of the entire transparency, but in addition, increase color contrast: for instance, greens and blues will be clean and reds and yellows will have their full color. Without masking, these desirable effects would not be attained. Passable color prints can be made without resorting to masking, but once one appreciates the difference, nothing but correct color masking will be tolerated.

It is almost impossible to make the masks and separation negatives from the transparency by contact. To obtain the desired quality of sharpness and lack of granularity, we must make both the masks and negatives through the Focomat enlarger. The size to which you will want to enlarge will depend upon what size enlarged negative your second, orthodox enlarger will take.

Make your masks and separation negatives as large as your second enlarger will accept and you will not regret it. In making enlarged masks you will need some method of registering them after they are processed and dry, so they can be laid in perfect register over the separation negative to be exposed. The simplest method is an "L" shaped angle and a cover glass. Figure 1 may show more than many words could tell. Plywood is a good material from which to make it. Build it slightly larger than the

flat sheet film you will use and get a  $\frac{1}{4}$ " piece of clear plate glass about  $\frac{1}{2}$ " smaller each way than the size of the film. This will permit you to hold the films in position and place the glass over them to hold the sheets flat and in proper position. Have the edges of the glass ground so you will not cut yourself, when working in the dark. The register board must be firmly fastened to the base of your Focomat enlarger screwed as shown in the sketch. You could use a long baseboard and "C" clamps over your enlarger base or table top. Do not trust it not to slip, make *sure* it won't. Care at every step will give you good results and if you do not take precautions you can be sure of trouble.

The materials you need to make separation negatives are:

- 1 Eastman Film Step tablet #1
- 1 Wratten #29 "F" gelatin filter
- 1 Wratten #61 "N" gelatin filter
- 1 Wratten #49 "C4" gelatin filter
- 1 Wratten #11 "X1" gelatin filter

(Filters need be only big enough to cover your enlarging lens, probably 2" square)

- |                                |                             |
|--------------------------------|-----------------------------|
| Eastman Highlight Masking film | } Size selected<br>see text |
| Eastman Pan Masking film       |                             |
| Eastman Super XX film          |                             |

Film is used because the emulsions are much more satisfactorily coated than is available with glass plate materials. Remove your transparency from its mount and place it in the special hinged, double glass carrier of the Focomat enlarger; mask off with tape all around, leaving only the picture area and the perforations on one side showing. Place the film step tablet alongside, allowing the tablet to show through the perforations as shown in Figure 2. The tablet is longer than needed and we need use only the lighter end and ignore the rest that is extending beyond the frame area. Place transparency in your enlarger with the emulsion side up. Be sure your transparency is dusted and condenser and enlarger lenses are clean so you will get good results.

Place the film register board under the enlarger, a sheet of white paper the size of your film under the glass and focus to proper size and position. Be sure it is in the best possible focus. Fasten the film register board and your enlarger securely. You will need to make some provision for holding the filters beneath the lens. On some enlargers you can use the red filter holder for this purpose if the filter is removable. The red, green and blue separation filters can then be alternately placed in position beneath the lens. You will have to determine your own proper exposures but I will give you a guide by giving the light output in foot candles of the enlarger I used, as well as all exposures too. You can get a rough approximation of the exposures you will have to give by comparing your light output with mine. Color of light source and condensing lenses will affect direct comparisons. The proper

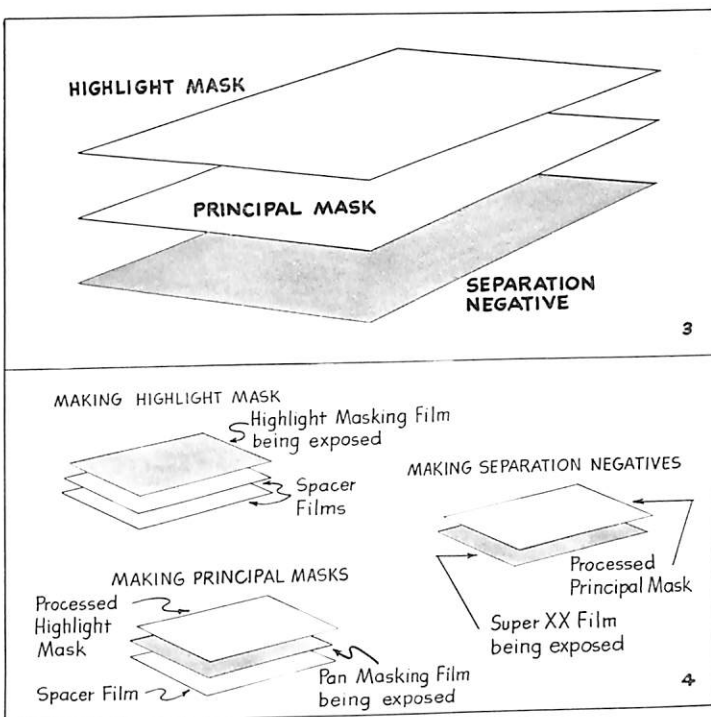
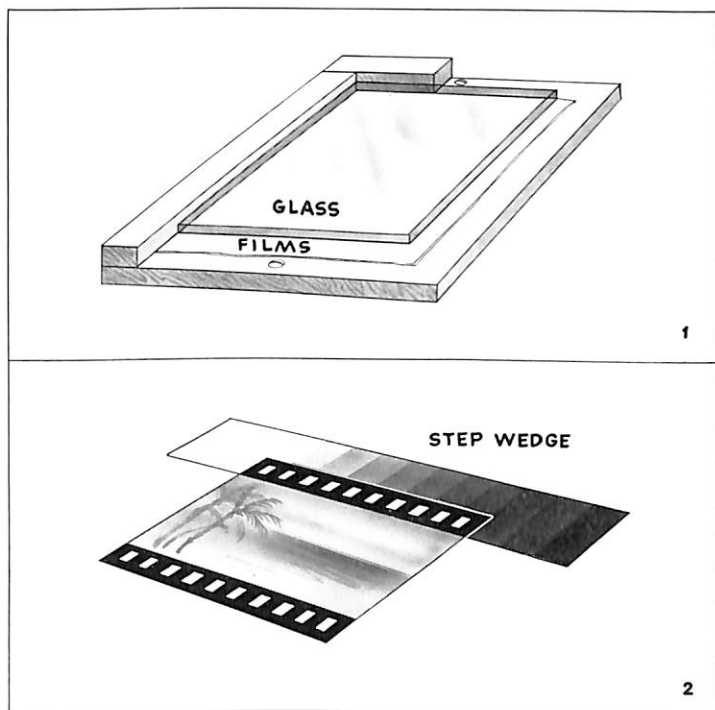


method of keeping balance is to check the masks and negatives against each other by comparing results of the Step Chart between masks and between separation negatives.

Figure 3 shows a stack or pile of three films. The top is called "Highlight mask," then comes the "Principal mask" and "Separation negative" is on the bottom. They are not used in this manner, but they are exposed in these positions. Take a sheet of film out of your Pan Masking Film box and one out of your Super XX film box, in the dark naturally, to avoid fogging the entire package. You will use these two films as "spacers," on the register board, in order to get the highlight mask material up to its

size will stabilize after processing to what it was before and therefore register will be maintained. It may be advisable to allow the film to acclimate itself before using by removing the foil inner wrapper of the box several days before using. If immediate action is needed the film may be spread out on a table in total darkness for a half hour which is usually sufficient.

I believe that you have now sufficiently grasped the generalities to enable me to give the exposure and processing information. With enlarger in final position and nothing in the negative carrier, illumination falling on enlarger baseboard was 6 footcandles. Refer to Figure 4 for film positions.



proper height when you expose it, and the pan masking film to its proper height. The procedure used in making masks and negatives is roughly like this: A highlight mask is made and after processing and drying, it is placed over a sheet of Pan Masking film on the register board and covered with the glass. An exposure is made with the proper filter and the pan masking film is processed. The highlight mask is no longer needed and is set aside. After the pan masking film is dry it is placed on the register board over a sheet of Super XX film and the exposure is made through the proper filter. After processing this sheet of Super XX and if everything has gone right, you should have a good separation negative. This explains the making of only one of the three separation negatives. Two others are similarly made. One highlight negative is used for making two principal masks. Two negatives are made by using the red filtered principal mask and the other negative by using the green filtered principal mask. Figure 4 shows the stacking of the "spacer" films we spoke of earlier and the films being exposed. In all cases the film is placed emulsion up. If films are not subjected to great heat or humidity changes, and kept in the same room, the

#### Highlight Mask (one)

Use two "spacer" negatives below on register board. Expose the glass-covered highlight masking film 2 seconds and develop for 50 seconds in DK 60A at 68 degrees F.; its appearance should be as shown in illustration. Highlight areas alone should be the only parts recorded.

Fix in hypo, wash briefly and dry.

Note—if exposure time is too short for your conditions, expose through "N" filter.

#### Principal Masks (two)

Use 1 "spacer" negative below on register board. Expose pan masking film with highlight mask registered on top, covered by glass, through "F" filter for 30 seconds.

Develop for 2 minutes and 10 seconds in DK 60A at 68 degrees F.

Fix, wash and dry. This mask is used for masking the red filter, the cyan (blue-green) printing negative and the green filter, magenta printing negative.

Expose another Pan Masking, clipping off one corner for identification, with highlight mask registered on top, covered with glass, through XI filter for 60 seconds.

*Continued on page 34*



# ARCTIC WINTER JOURNEYS WITH THE LEICA

by Richard Harrington, Toronto, Canada



OUTWARD BOUND

*Leica IIIf, Elmar 50mm. at F:6.3, 1/100 sec., Kodak Panatomic-X Film*

It has been my good fortune for the last three years to journey into the Canadian Arctic. These trips were made by dog-team during the winter, and covered several thousand miles.

My Leicas first met the extremes of northern temperature on a two-month assignment among the Chipewyan Indians, at the border of Manitoba and the Northwest Territories. The following year they went farther north, among the Eskimos of northern Quebec.

Last year I traveled with Eskimo guides from Coppermine on the edge of the Arctic Ocean, a roundabout route of 1000 miles by dog-team to Cambridge Bay. The Leicas have had a thorough work-out in Arctic temperatures.

As a free-lance photographer, I recorded the life and customs of the most remote and primitive people on this continent, the Canadian Eskimos of the Barren Lands.

Unlike the modernized Eskimos of Alaska and the government-supervised natives of Greenland, the Canadian Eskimos still lead fairly self-sufficient lives. For the most part, they live off the land and sea, like their ancestors, and are independent of the trading posts.

In isolated regions, they still hunt with bow and arrow. Much of their food is eaten raw and frozen. Some live in igloos; others in tents of caribou skin, fur side out. The caribou provides home, clothing and food to these Eskimos. Its backfat furnishes the fuel for their stone lamps which provide light and warmth.

Unlike white men, the Eskimos live very happily and harmoniously together, laugh a great deal. They are unusually well-developed physically, and are highly resourceful. They don't think too highly of the white man, but are too polite to say so openly.

I count myself lucky to have been able to visit these people who live as far as 500 miles above the Arctic circle. Travel in the Arctic, either by airplane or dog-sled, is costly. The Canadian Government does not encourage travel in the Arctic for many reasons, among them the physical hazards of such trips.

I was warned by friends of the difficulties of photography in the Arctic, that I need not hope to get any photographs. In fact, I knew that extremely few good photographs have been taken during the Arctic winter.



MINGILGAK MATRON

*Leica IIIa, Elmar 90mm. at F:9,  
1/100 sec; Kodak Panatomic-X Film*

It is understandable. The sun does not come above the horizon for weeks. The average temperature at Coppermine, for instance, for the month of February is  $-40^{\circ}$ . The winds blow ceaselessly. Without the proper native clothing, one would not last long.

Apart from the extreme cold which stiffens up the camera (or freezes it solid) and "frost burns" the photographer's numbed fingers, there are several other occupational hazards to photography in the Far North. Travelling by komatik (native sled) plays hob with all equipment.

Travelling by dog-team, everything must be bundled into as small a space as possible. Also a minimum of weight has to be considered. A team of twelve huskies have already enough to pull, when hauling equipment and supplies for several weeks. Every last item gets knocked around. The bumping and jolting of the sled, the number of times it overturns, are severe tests of durability of both camera and photographer.

At temperatures between  $40^{\circ}$  and  $60^{\circ}$  below zero, no camera can be expected to work. Through experience with frozen shutters and diaphragm, frost-bitten fingers, brittle film—I learned!

Now I carry two Leica cameras (IIIa and IIIb models). One is meant for emergency, and stays in my packsack where it freezes solid. The other I carry in a tanned moosehide bag, sewn to measure, under my artiggi (caribou fur parka). It rests there next to my long underwear and keeps warm.

At night in the igloo or tent, the camera is pushed into my caribou sleeping bag, and I sleep with it. Although during the night the Leica often rolled under me while sleeping no damage was done to photographer or camera.

Caribou hairs get into everything. It is vital to wear the light warm caribou clothing to meet the extremes of temperature; but the hair sheds interminably. It got into the food. I strained it between my teeth when drinking tea. And the hairs worked themselves even into the inside of the camera.

At first, I blew to remove a caribou hair—but the casual habit of the south is not that of the north. The lens and mount frosted up at once. I had to be content with shaking the camera in order to dislodge a caribou hair across the lens after that.

Usually I carry with me twelve or fifteen Leica Cassettes, loaded at home. It is impossible to re-load cameras outdoors. So when nearing the end of a spool, I would take a fresh cassette out of my packsack. I had to take care that the ice-cold metal did not stick to my fingers, removing some of the skin.

The cassette goes into my pants-pocket, where it feels like a lump of ice for a while. Both went into my sleeping bag, somewhere near the bottom of the bag. By morning, the film has reached body temperature, and is no longer so brittle. Sitting in the igloo, I could then transfer it into the camera.

On the trail there is much opportunity for action shots: of dogs, of the Eskimo guide handling the komatik, the

MINGILGAK MAID

*Leica IIIb, Elmar 50mm. at F:9,  
1/100 sec; Kodak Panatomic-X Film*







MINGILGAK MARKSMAN

*Leica IIIa, Elmar 90mm. at F:6.3, 1/200 sec; Kodak Panatomic-X Film*

icing and repairing of sled runners made of frozen mud, of the ever-changing vastness, of building igloos.

There is no time to arrange the subject for a photograph. The camera shutter becomes sluggish in less than a minute. So that when I see a likely shot, I reach under my artiggi, grab the camera. The diaphragm has been previously set at F:9 or F:12.5. The shutter is set at a glance. And snap! there's my picture.

There is no time at 60° below zero with a 20-mile wind blowing to go in for refinements such as filters, lenshood or exposure meter. Contrary to the average belief, the Arctic is not dark all winter, though it is dim for a couple of months. As soon as the sun shines above the horizon, the snow reflects a light more dazzling than Florida's whitest beaches. It lends itself to portrait studies, as the reflected light fills in shadows.

Working with such speed, I have never found it necessary to winterize my Leicas. In fact, I am against it, as I enjoy the smooth precision of my miniature cameras.

Both Leicas have made well over 15,000 exposures each, since I bought them second-hand about 10 years ago. Each one has a coated Elmar 50mm. lens.

I carry only two extra lenses—the 35mm. and the 90mm. Larger focal length lenses are too difficult to keep warm.

The 90mm. lens, for instance, I found could be used only around settlements. It is excellent for faces surrounded by frost-covered furs. But the lens gets cold quickly, and I have to run inside to thaw out camera and lens, perhaps over the gentle flame of a seal-oil lamp.

Always starting out on such a trip, there is the apprehension that this time something might go wrong. Merely because I had been fortunate in time past, was no guarantee that this time I would bring back good results. And there is never any question of going back for a re-take. Of course, there is no developing on the trail. After three or four months, I would become anxious to discover what I had—or if I had anything.

So far, in spite of the terrific jolting and the extreme temperatures the equipment has to undergo, nothing has gone wrong. Often the boxes holding the extra lenses and cameras have been worn through and broken up, but the equipment itself was none the worse. Using Leicas under these most rigorous conditions, I have really no suggestions to offer as to improvement of the equipment.

However, the film manufacturers have done little to improve the current miniature films on the market. Surely a film of the Panatomic X variety can be made of finer grain and better speed.

Many of these northern photographs have appeared in *Life*, *Holiday*, *National Geographic*, *Parade* and other magazines. The next trip north is for *Life Magazine*. Mr. Hicks wants a picture-story of a Stone Age Eskimo family living in the vicinity of the Magnetic North Pole.

#### HOMeward BOUND

*Leica IIIf, Elmar 50mm. at F:4.5, 1/500 sec; Kodak Panatomic-X Film*



# CHOOSE YOUR PERSPECTIVE

by Frank F. Taylor, Capitan, New Mexico

**A**lthough almost all Leica photographers know of the availability of interchangeable lenses of uniformly high quality for the Leica, and although many enthusiasts own interchangeable lenses, they are often unaware of the remarkable control of perspective obtainable with the various lenses of long and short focal lengths.

The most well-known control of picture taking available to the Leica fan who has more than the normal 50mm. lens is that of image size. We know that the size of the image on the negative is in direct proportion to the focal length of the objective. That is, the ratio of image size is 35:50:85:90:127:135, etc. If the image of a tree at an infinite distance measures 5mm. when produced by a 50mm. focal length lens, the same tree at the same distance will measure 9mm. when formed by a 90mm. lens. The views shown in Figures 1, 2, and 3 show the image magnification possible from the same camera position when the 35, 90, and 135mm. lenses are used in succession to photograph the same general scene.

One of the most common uses of the longer focal length lenses is that of achieving good proportion in the features of the model and at the same time producing a usable portrait negative—limited to only the model's head or head and shoulders. If the 50mm. lens is on the camera and the camera is at a close enough distance to limit the scene to this portrait format, the chin of the model closest to the lens will be too large in proportion to the ears, which are further from the camera. The result is lengthened chins and noses and foreshortened ears and shoulders. This fault of portraiture can easily be corrected by selecting a lens of 85mm. or 90mm. focal length producing a large head on the negative from a distance of about six feet.

It should be emphasized at this point that as long as the camera-to-subject distance remains the same, there will be no change of perspective—no matter if the 35mm. Summaron or the 400mm. Telyt lens is used. Of course, the angle of view and the image size of the subject on the negative will be greatly altered, but perspective will remain the same. Only when the camera is moved closer to, or further from, the subject will the perspective change. Naturally, the quality of the picture suffers when an extreme enlargement of a portion of the negative is made, which is an argument in favor of filling the frame with subject matter so that the entire frame may be enlarged.

A striking change of perspective is shown in Figures 4, 5, and 6. In this series, three shots were made of the same model, keeping the image size of the model almost constant and moving the camera away from the model as the longer focal length lenses were brought into use. The lenses used were of 35, 90, and 135mm. focal lengths. Notice the change in relative size of the tower of the building in this series. In Figure 4, made with the Summaron 35mm.



FIGURE 1



FIGURE 2



FIGURE 3





FIGURE 4

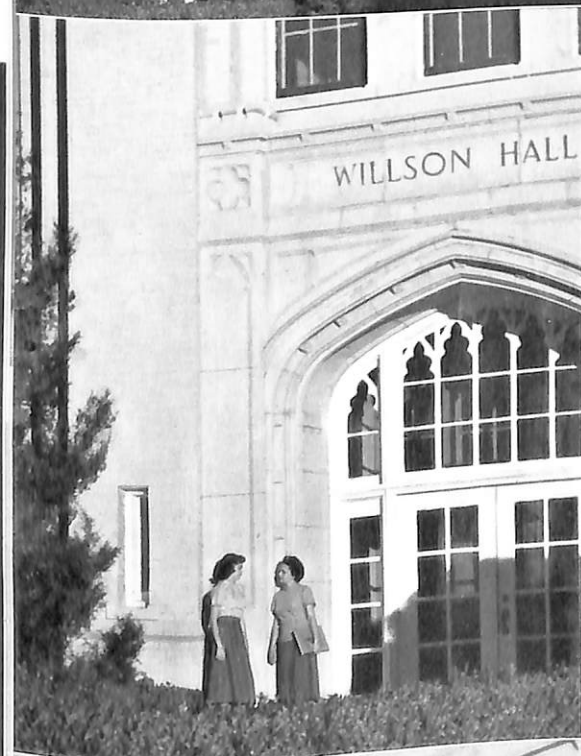


FIGURE 5



FIGURE 6

lens, the entire tower of the building is visible, but in the Hektor 135mm. shot little more than the door itself can be seen.

Perhaps less well-known to Leica users is the control of the size of background objects in relation to the size of the subject. This technique of perspective control is quite useful when the photographer wishes to include subject matter in the background, which is at too great a distance from the main subject to be of sufficient size if photographed through the "normal" 50mm. lens. In Figures 7 and 8 the foreground subject remains approximately the same size, while the model in the background is given more prominence by its greater relative size in the second of the two photographs. The first photo was made with the Summaron 35mm. wide angle lens on the Leica, F:16, 1/60, while the second was made with the 135mm. Hektor lens, F:16, 1/60 second. The change of perspective occurred when the photographer moved away from the subject to make the

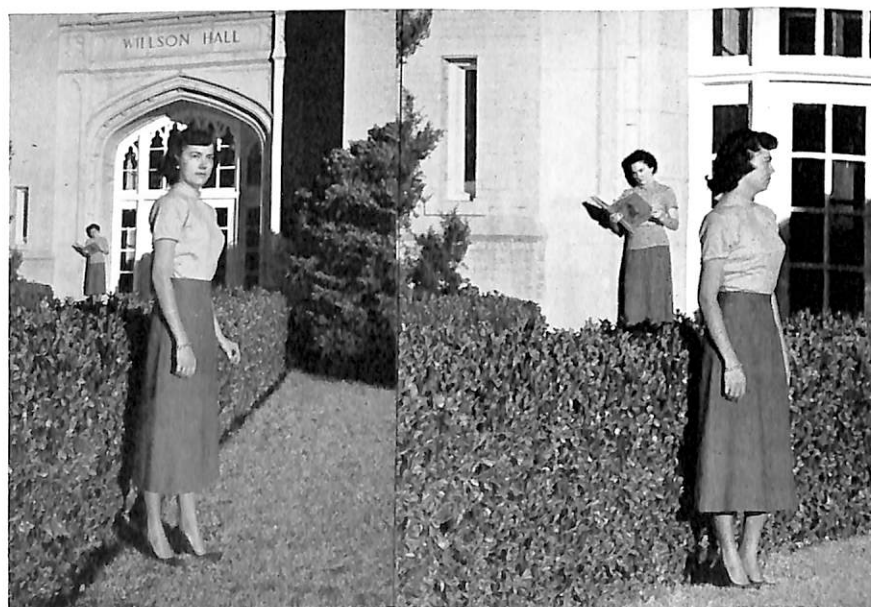


FIGURE 7

FIGURE 8

second shot. Viewing the model through the Imarect Finder and gradually closing the diaphragm of the finder to keep the view the same, the photographer moved away from the subject until the proper balance between subject and foreground sizes was obtained. At this point, the Imarect Finder indicated that the 135mm. Hektor lens should be used to produce a picture with the foreground model approximately the same size as in the picture made with the 35mm. Summaron lens.

Leica users should know and make use of these simple rules governing photographic perspective. All the interchangeable lenses for the Leica have great resolving power and yield negative images which can be enlarged to an amazing size. By selection of the correct camera position and by choosing the proper focal length lens, the Leica photographer can emphasize or subdue foreground and background objects in an almost infinite number of ways. The Leica is noted for its versatility—don't limit yourself to the normal (50mm.) lens only—make the most of this versatile camera by choosing the lens that makes your picture say exactly what you would have it say!

# THE 1950

## GRAND LEICA SPORTS AND ACTION COMPETITION

### \$2000.00 IN VALUABLE PRIZES!! FOR REGISTERED LEICA OWNERS

You may submit black and white, and/or color shots of any outdoor or indoor sporting or action subjects (see rules 2 and 3), as long as the pictures are made with a *Leica Camera* which is *registered* with us. If you have never bothered to register your camera before, or have been doubtful whether a Leica Camera obtained abroad (or brought in by a G.I., or purchased from a friend) is eligible for registration—then *send in the serial number now!* Your Leica Camera need not have been imported by E. Leitz, if it is a genuine Leica, we will register it—along with any other Leitz equipment you may own.

Register right away: make yourself eligible to enter the contest—as well as to receive *Leica Photography* (within the U. S. and Possessions), and the latest Leica literature. Remember, no entries will be accepted unless they bear the serial number of the Leica Camera with which they were made. (See rule 4.)

Pictures do not have to be made especially for the contest. Within the subject range, the time limit, and the number of entries permitted for the contest—you are free to enter any good sports and action shots you may have that you should like to match against those of other Leica enthusiasts. In fairness to all the competitors, however, we will accept no entries that have already won a prize in contests sponsored by any other photographic publication.

The awards for the contest are listed below, and in addition, a lecture set—composed of the prize winners from the contest—will be sent around the country as a traveling exhibition. Also, some of the prize winning entries will be reproduced in *Leica Photography* during 1951.

#### PRIZES FOR GRAND LEICA SPORTS AND ACTION COMPETITION

Closing Date—September 1st, 1950

(Includes both Black and White and Color)

1. Leica Camera, IIIc, with Summitar Lens  
Plus, Oskar Barnack Medal (bronze)
2. Leica Camera, IIIc, with Elmar Lens  
Plus, Oskar Barnack Medal (bronze)
3. Leica Camera, IIc, with Summitar Lens  
Plus, Oskar Barnack Medal (bronze)
4. 127mm. lens
5. Focomat Enlarger
6. 90mm. lens
7. Micro-Ibso Attachment
8. Focaslide Outfit
9. Imarect View Finder
10. Desk Viewer

PRIZES OF BINDOMAT KITS WILL BE AWARDED TO TEN RUNNERS-UP

### CONTEST RULES

1. Contest is open to all *Registered Owners* of Leica Cameras (except employees of E. Leitz, Inc.), resident in the U. S. A. and Possessions only.
2. Not more than six black and white prints may be submitted in the contest. These prints should be unmounted, and not smaller than 8" x 10".
3. In addition to the above, not more than six 35mm. color transparencies may be submitted. All transparencies should be bound between 2" x 2" glass plates with taped edges, to guard against damage—and securely packed in soft material in a sturdy container.
4. All entries must show the following data:
  - a. name and address of contributor
  - b. serial number of Leica Camera
  - c. lens and accessories used
  - d. exposure, type of film and developer
  - e. title of picture—and where taken
5. The above data should appear:
  - a. on the reverse side of all prints
  - b. in the upper and lower title spaces provided on the front and back of the mask, before the slide is bound
6. Entries will be returned only if a stamped self-addressed envelope—or self-addressed label and postage is contained in the same package. Do not send postage in separate letter. The Contest Editor cannot entertain any correspondence of any kind regarding entries.
7. While exercising the utmost care in handling all entries, E. Leitz, Inc. assumes no responsibility for loss of, or damage to, contest entries.
8. Prize winning entries, including all reproduction and promotional rights, become the exclusive property of E. Leitz, Inc.
9. All entrants who win prizes will be required to furnish the original negatives and transparencies before the awards are made.
10. E. Leitz, Inc. will offer to purchase outright the original negatives and color positives of non-prizewinning pictures. The sum of \$10 will be paid for a black and white negative; the sum of \$20 will be paid for a color positive.
11. If either prize winning or purchased pictures portray a living model, a signed and witnessed "Model Release Form" must be submitted before the award or payment is made.
12. Judges in the contest will be a panel composed of executive members of the staff of E. Leitz, Inc. Their decision will be final.
13. Address all entries to: Contest Editor, *Leica Photography*, E. Leitz, Inc., 304 Hudson Street, New York 13, N. Y.
14. Prize winners of the competition which opens with this issue and ends September 1st, 1950, will be announced in the Christmas issue of *Leica Photography*.



## Professor Berek—Creator of Leica Lenses

On October 15, 1949, Professor Max Berek, director of the department of Science at the Leitz Works, died at the age of sixty-three at Freiburg, Germany. Not only the Leitz Works, but the entire science of optics, with its many-sided applications, suffers an irretrievable loss through his death. Only a few who met this man, of unassuming appearance and modest manners, knew of all his internationally significant scientific achievements.

Max Berek entered the Leitz Works thirty-seven years ago, after having obtained his doctor's degree in Berlin under the mineralogist Professor Leibisch. Here he found ample scope for work in the field of microscopy, but was interrupted in this activity through a year of military service and the first World War. After returning from the war, he resumed his former activities, and during the following years engaged in the problems of microscopy of ores, a field which had already been his main interest during his studies at the university. Professor Berek's systematic investigations in the qualitative and quantitative polarimetric determination of minerals and ores in the form of polished thick sections under the microscope, led to basic improvements of the polarizing microscope and the perfection of its accessories, as well as the creation of new accessories for this purpose. Among these were a compensator for the detection and measurement of small birefringence, his universal rotary stage and his integrating board, his slit microphotometer for the measurement of reflecting power and his recently developed eye piece with analyzer for the determination of optical anisotropy. Other inventions by Dr. Berek are the universal photometer, known to scientists as the "Leifo," for the determination of chemical concentrations, densitometry, desaturation, and trichromatic colorimetry, as well as the Tyndallometer for the determination of dust content of the air.

The beginning of the manufacture of the Leica in 1924, gave Dr. Berek an additional sphere of activity, as he was asked to design specialized lenses of high quality for the Leica Camera. As Dr. Berek had always occupied himself with theoretical studies in the field of optical design, he was equal to the task of solving these problems in a relatively short time. While the Leica was still in the development stage, he created the first "standard" lens with a focal length of 50mm. and a speed of F:3.5. This lens was called "Elmax," using the first two letters of the name Ernst Leitz and his own first name Max. On the basis of this lens, Prof. Berek calculated the series of "Elmars" with their different focal lengths, which have become known all over the world. During the following years all the different lenses that are necessary for taking, enlarging, projecting and reproducing Leica photographs were developed in the Optical Design Section of the Leitz works which he himself founded and advanced. Again and again, Professor Berek was engaged in the development of numerous other accessories for the Leica in an advisory capacity. Together with the necessary mathematical knowledge, he possessed a fine instinct which enabled him to solve all these problems either in an entirely new way, or by the combination of already known facts.

Besides solving these problems, from which practical optics benefited primarily, Professor Berek engaged with particular enthusiasm in the fundamentals and problems of theoretical optics. His contributions to this field were particularly valuable and basically significant. Today Berek's name is identified with the theory of image formation in the microscope, which was once completely dominated by the name of Abbé. His theoretical work included the establishing of a fundamental physiological principle of the perception of light stimuli, studies of coherence and consonance of light as well as his analysis of the efficiency of binocular telescopes.

Professor Berek was one of the founders of the German Society for Applied Optics. He was a member of the board of editors of the ZEITSCHRIFT FÜR INSTRUMENTENKUNDE, and had lectured and taken an active part in the discussions in other scientific societies, such as the Society for Physics, Society for Technical Physics, Society for Mineralogy, and the Society for Cinematographic Engineering. He also presented papers at the neighboring universities of Giessen, Frankfurt and Marburg.

In recognition of his special merits in the field of optics, he was appointed a professor to the faculty of the Department of Science of the University of Marburg in 1925. He later was dismissed from this post, when he, like many other distinguished scientists, would not comply with the Nazi regime. The dismissal from his professorship naturally was revoked in 1946 by the University of Marburg. As a personal mark of distinction, in 1938, Professor Berek was granted the Grand Prix at the World's Fair in Paris; and on the occasion of the centennial of the Leitz Works in August of 1949, the Science Department of the Justus Liebig Hochschule at Giessen presented him with an honorary doctor's degree.

Dr. Berek's interest at the Leitz Works was not limited to his professional activities alone. He took an active part in furthering the social interests of the employees as demonstrated by the responsibility he took for the employees' pension fund, of which he was a co-founder, by his work for the employees' council and in personal participation in festivities at the Works.

The premature death of Professor Berek has deprived not only the Leitz Works, but also his city and above all the vast number of his personal friends, of a personality of the highest caliber. All those who knew and loved Max Berek will keep his memory alive in gratitude and admiration.



SPRING THAW  
By H. M. Smallwood





LOOK!

By Jay Risling





BALLET GIRLS  
By Alfred Eisenstaedt



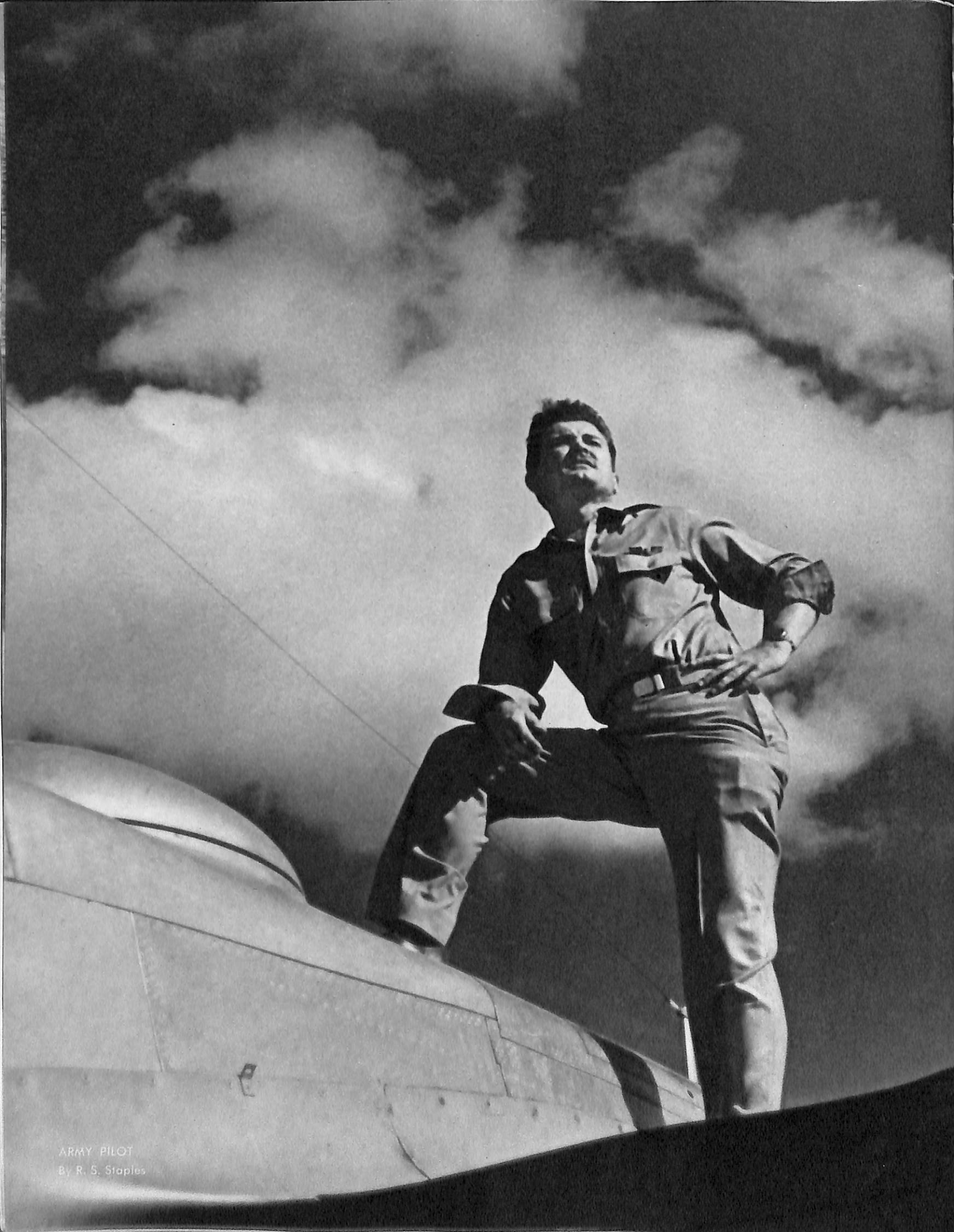


EXPLORER  
By Richard Harrington



BATHER  
By Bryan Heseltine





ARMY PILOT  
By R. S. Staples



MARY LOU  
By Russell E. Grey





CO-OPERATION  
By Elmer L. Onstott



# NOTES AND TIPS

## ABOUT YOUR PICTURES

### "Spring Thaw" — By H. M. Smallwood, Nutley, N. J.

Leica Camera, II, with Elmar 50mm., F:3.5 lens, 1/100 second at F:11, Kodak Panatomic-X Film, Microdol Developer. Fifth prizewinner in first section of the Grand Leica Triple Competition for 1949

### "Look!" — By Jay Risling, San Francisco, Calif.

Leica Camera, IIIb, with Elmar 50mm., F:3.5 coated lens, 1/100 second at F:6.3; Ansco Supreme Film, Finex Developer. Fifteenth prizewinner in the final section of the Grand Leica Triple Competition for 1949.

### "Ballet Girls" — By Alfred Eisenstaedt, New York, N. Y.

Leica Camera, IIIa, with Elmar 35mm., F:3.5 wide-angle lens, 1/20 second at F:6.3; Kodak Super XX Film, DK 20 Developer

### "Explorer" — By Richard Harrington, Toronto, Canada

Leica Camera, IIIc, with Elmar 90mm., F:4 1/200 second at F:6.3, 2X Yellow Filter Kodak Panatomic-X Film, Panthermic 777 Developer

### "Bather" — By Bryan Heseltine, Newlands, South Africa

Leica Camera, IIIb, with Hektor 135mm., F:4.5 lens, 1/20 second at F:6.3; Ilford F. P. 2 Film, Panthermic 777 Developer

### "Army Pilot" — By R. S. Staples, Chico, Calif.

Leica Camera, IIIa, with Summar 50mm., F:2 lens, 1/100 second at F:6.3 Leitz Orange-Red Filter, Kodak Panatomic-X Film, Microdol Developer

### "Mary Lou" — By Russell E. Grey, Detroit, Mich.

Leica Camera, IIIc, with Elmar 50mm., F:3.5 lens, 1/100 second at F:5.6; Kodak Plus-X Film, F-R Developer. Tenth prizewinner in the final section of the Grand Leica Triple Competition for 1949

### "Cooperation" — By Elmer L. Onstott, St. Louis, Mo.

Leica Camera, IIIa, with Elmar 90mm., F:4 lens, 1/200 second at F:6.3; Agfa Finopan Film, Champlin 15 Developer. Ninth prizewinner in the final section of the Grand Leica Triple Competition for 1949

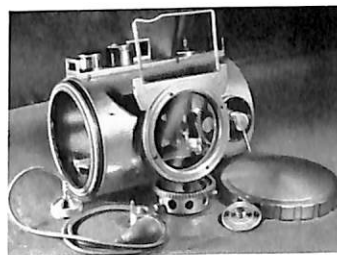
**ON MONOCHROMES FROM COLOR FILMS** . . . "Diaversal," a new type of paper which permits a simplified method for making monochrome prints from color films, has been developed by the Gevaert Company of America, Inc., New York, N. Y. The Gevaert Company describes this method, in which no lengthy processing is required and only three solutions are used, as follows:

"The color transparency is projected on the 'Diaversal' paper in the darkroom under ordinary bright safelight. A temporary negative image appears, when it is placed in the first solution. The paper is then placed in a special solution which causes the image to transfer to another layer on the paper base, at the same time causing the negative image to partially disintegrate. On completion of the transfer time, the paper is held under running water and

the negative image washes away, leaving a faint image on the paper. A few moments immersion in a conventional toner produces a print with all the gradations of the original color subject, but now in a pleasing shade of brown. There is little or no grain and the use of the brown toner alleviates the chalky appearance often found in picture copies from color originals."

Among the uses claimed for the new product are: color photographers can submit inexpensive monochrome prints and not subject precious color shots to handling; the amateur movie fan can easily produce enlarged stills from his movie scenes; and color slide enthusiasts can make enlarged or contact stills.

**VENETIAN VENTURES** . . . In a recent letter from Venice, Italy, Carlo Donatelli inclosed several photographs taken under water with the aid of a container which he has de-



veloped. Pressure gaskets prevent any infiltration of water into the box. Mr. Donatelli reports that with the container holding the Leica, it is possible to set the focusing range and to take consecutive shots while swimming under water. It is also possible to operate the shutter at a distance of a few feet, in or out of the water.

As designed by Mr. Donatelli, this water-tight housing measures 8" in length, 5" in diameter and weighs about 6 1/2 pounds.

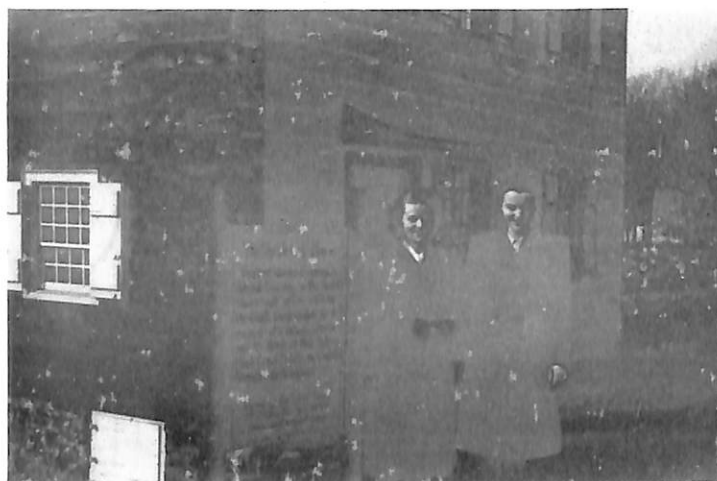
The under-water shots reproduced here were taken with a Leica, inclosed in this container, at a shutter speed of 1/100 of a second. If this sort of thing grows, no Lido will be complete without water-Leicas.

**RED TAPE** . . . In response to the many requests from enthusiastic Bindomat binders, we are now supplying a special type of extra-thin, cloth red tape—from your Leica Franchised Dealer, price \$1.50 per roll, for binding more than 100 slides—codeword TIEUP.



## NOTES AND TIPS

**HAUNTED (SCHOOL)HOUSE . . .** Ways and means of getting good "ghost" pictures with camera know-how have already been discussed in two earlier issues of *Leica Photography*. Now, you may be interested in the *solarized* ghosts which materialized on film when Robert G. Moore, a Brooklyn correspondent, accidentally overdeveloped a roll of negatives in Panthermic 777 Developer.



The overdeveloped roll produced some "very interesting results": this picture, the best of the lot, was taken on a bright day, with a Leica and the Hektor 50mm. lens; exposure was for 1/60 of a second at F:9 on Plus-X film, and no filter was used.

Mr. Moore snapped his wife and cousin standing in front of the Voorlezer's House, which is the earliest known elementary school in America. Built before 1696, this "little red schoolhouse" is located in the village of Richmond, Staten Island, in New York City, and has become a favorite subject of amateur and commercial photographers alike.

**FLASH FACTORS FOR COLOR FILM . . .** The following factors apply to the G. E. No. 6 and Wabash Press 40 Bulbs, when used with Kodachrome "A" Film and the Leitz Chrome Filter:

Shutter Speed	G.E. No. 6 Bulb	Wabash Press 40
1/20	45	55
1/30	45	55
1/40	32	44
1/60	27	31
1/100	23	26
1/200	18	21
1/500	15	18
1/1000	12	15

It should be noted, however, that these figures are intended as a guide, and not as an inflexible rule; they will vary with the light reflecting conditions under which the subject is being photographed.

**TWO BATHS ARE SOMETIMES BETTER THAN ONE . . .** Below, is the Leitz Two-Bath Formula, which was also mentioned in the fall, '48, number, and which many Leica Photographers have since asked us to print in full. We recommend use of this formula, first introduced in 1938, for excellent gradation and reasonably fine-grained negatives, and for the greatest possible sharpness without loss of emulsion speed.

### SOLUTION A

Metol	5 gm.
Sod. Sulphite (anhyd.)	100 gm.
Water	1000 cc.

### SOLUTION B

Sod. Sulphite (anhyd.)	6 gm.
Sod. Carbonate (anhyd.)	15 gm.
Water, to make	1000 cc.

### TABLE OF DEVELOPMENT TIMES

Film	Minutes in Solution A	Minutes in Solution B
Kodak Panatomic X	3	3
Kodak Plus X	4-5	3
Kodak Super XX	4-5	3

The time periods given above are for development at 65°F. It is recommended that an extra 5% development be given each additional film, to allow for a slight weakening in the strength of the solutions.

For normal sized prints, both baths must be used, but if enlargements greater than 20" x 16" are desired from medium-speed films, it is possible to obtain negatives with slightly steeper gradation and even finer grain by developing one minute longer in Solution A, and omitting the second bath entirely.

The developing times recommended here are for comparatively soft negatives, but gradation can be varied, if desired, by extending the development period in Solution A up to a minute and a half longer. This will not affect the grain size adversely, but will increase the contrast. It must be remembered, however, that a combination of the two baths *does not* give the same result.

Since the second bath contains no developing agent, it is important that no intermediate rinsing water be used, as enough developer is carried over from the first solution to allow the shadow detail to be built up in the second.

Although this developer keeps extremely well, the usual precaution of storing in well-filled, tightly stoppered bottles must be followed. The slight sediment which may form in the solutions after they have been used does not affect their action, but may be filtered out if desired.

**BIGABOO! . . .** Flash synchronization with a focal plane shutter on larger size cameras is almost impossible due to the length of time required for the shutter to travel across the film aperture. However, with the Leica camera synchronization is entirely satisfactory as the shutter travels a shorter distance and takes a shorter time in which to do so—approximately 28 milliseconds.

For the finest . . .

## GEVALUXE VELOURS

With Gevaluxe Velours the photographic print becomes a work of art.

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A warm-toned chloro-bromide paper with a "crayon" effect, for portraits or salon prints. Three contrasts, a variety of surfaces.

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**CUTTING REMARKS . . .** Tom Burnam, 5717 East 61st, Seattle, Wash. writes of his method for removing exposed portion of roll for immediate processing as follows: "If the Leica film-cutting knife is not available, this alternative method of removing exposed lengths of film for immediate processing works very well. Take into the darkroom, or place in your changing-bag, a pair of small manicure scissors, preferably straight although the curved type will do, as well as a larger pair of scissors. Have your film-tank ready for loading. Remove the bottom plate of your Leica and carefully insert the manicure scissors into the space in the camera body where film comes out of the cassette (not the take-up spool end). Make a small cut in the edge of the film.

"Next, replace the bottom plate if you are using the Filca film magazine (even though you are working in darkness: this prevents rewinding the film through the closed mouth of the cassette with consequent danger of scratching) and rewind film as usual, remembering of course to set the rewind lever at 'R'. Then again remove bottom plate, take out cassette and disassemble. Feed the exposed film into your film-tank as you feel with your fingers grasping the edges of the film for the cut which you made with the manicure-scissors. When you feel it, cut the film at that point with the large scissors. Using the template, make a new leader on the unexposed film and reassemble the cassette as usual. Then develop the exposed film. Since the cut made in the film-edge is immediately re-wound into the cassette, there is no danger of damage to the shutter if this method is followed; only uncut film passes the sprockets and film pressure-plate."

## NOTES AND TIPS

**MEN'S FASHION NOTE . . .** George W. Perkins, II of 105 First Street, Melrose 76, Mass.—writes:

"These cameras (Leicas, IIc) are being used professionally by me in filming the New World. They have given me such excellent results I feel that they will be the top standard for the serious worker for many years to come. Without my Leica—I actually feel undressed.

"On my travels, I have been in the habit of waking early, reaching for my exposure meter and Leica, slipping them on, and then—following up with my trousers and shoes or boots.

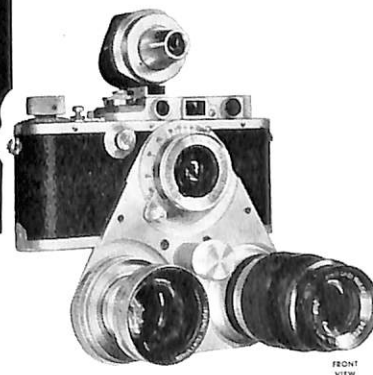
"These past few months in Alaska and in the Yukon, this habit paid many dividends."—For complete protection, wear the Leica next to the skin!!

**THE LEICA TANDEM . . .** This new accessory, described in the Fall, 1949 issue of Leica Photography, is now available for both Model IIc and IIIc Leica Cameras; price \$77.00, inclusive of tax, from Leica Franchised Dealers. It permits either simultaneous color and monochrome or stereo photography with two coupled cameras.

You've Experimented . . Now Experience  
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### the NEW H-F LEICA TURRET

only \$94<sup>50</sup>  
INSTALLED



Here is the new accessory discriminating Leica users have long awaited. How many times have you missed that never to be duplicated shot because you were fumbling for the right lens? How many times have you wished for a simple, effective means of changing lenses without the risk and fuss involved in screwing and unscrewing valuable Leica lenses?

The answer is . . . the new H-F LEICA TURRET. The correct lens is at your fingertips with just a twist of the wrist! Its action is smooth, swift and positive.

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# THE NEW MODEL Ic LEICA CAMERA

This youngest member of the Leica "C" family comes with an entirely new type of brilliant optical viewfinder. The new detachable finder has an engraved line on the inner face of the exit window, which indicates parallax at camera-operating distances closer than fifteen feet.

Two accessory shoes are permanently mounted atop the camera: the centrally located shoe accepts the finder, the other shoe accepts a separate rangefinder which is mounted *only* in the vertical position.



Shutter speeds range from 1/30 sec. to 1/500 sec. including "bulb"; time exposures are made with a Leitz wire release, which incorporates a locking fin. The new Model Ic Leica Camera will be welcomed as a "second" camera for color, as a basic camera for the beginner in 35mm. photography, and as a laboratory instrument in conjunction with either the Focalslide or the Micro-Ibso, for the scientist.

The camera body itself is of the same basic design as the Model IIIc Leica, to which it may be converted by the addition of the slow speed mechanism and rangefinder-viewfinder housing; details and prices of this conversion service will be announced at a later date.

The lid of the cowhide, everready carrying case is fitted to accept the separate rangefinder.

## WHERE TO GO . . .

### FOR LEICA SUPPLIES AND SERVICE

This Directory contains a partial list of LEICA Camera Franchised Dealers, all of whom are fully equipped to offer complete LEICA service and finishing.

Albany, N. Y.	CAMERA EXCHANGE, INC. 39 Maiden Lane
Albuquerque, N. M.	CAMERA SHOP OF NEW MEXICO 412-414 East Central Avenue
Amarillo, Tex.	HERTNER'S CAMERA STORE 114 West Sixth Street
Ann Arbor, Mich.	CALKINS-FLETCHER 324 South State Street
Atlanta, Ga.	FRYE'S PHOTO SHOP 259 Peachtree Street, N.E.
Baltimore, Md.	RITZ CAMERA CENTER 26 West Lexington Street
Beverly Hills, Calif.	BEVERLY HILLS CAMERA SHOP 417 North Beverly Drive
	AREMAC CAMERA EXCHANGE 9443 Wilshire Boulevard
Birmingham, Ala.	BROMBERG & CO., INC. 123 North 20th Street
Blue Island, Ill.	WATLAND BROTHERS 13039 S. Western Avenue
Boston, Mass.	BAB'S PHOTO REPAIR SERVICE 110 Tremont Street
	CLAUS GELOTTE, INC. 284 Boylston Street
	RALPH HARRIS CO. 47 Bromfield Street
	PARK SQUARE BLDG. CAMERA & PHOTO Arcade 12, Park Square Building
Brooklyn, N. Y.	BROOKLYN CAMERA EXCHANGE Stereo Dept., 549 East 26th Street at Flatbush Ave.
Buffalo, N. Y.	J. F. ADAMS CO., INC. 529 Main Street
	MASON'S-BUFFALO PHOTO MATERIAL CO. 37 Niagara Street
Cambridge, Mass.	HARVARD CAMERA EXCHANGE Harvard Square
	CLAUS GELOTTE, INC. Harvard Square
	DERBY JEWELER, INC. Harvard Square
Chicago, Ill.	BASS CAMERA COMPANY 179 West Madison Street
	BEL-PARK PHOTO SHOP 4757 Belmont Avenue
	CENTRAL CAMERA CO. 230 South Wabash
	CONWAY CAMERA COMPANY 34 North Clark Street
	ENGLEWOOD CAMERA SHOP, INC. 6544 So. Halsted Street
	THE GENERAL CAMERA COMPANY 2308 West Devon Avenue
	THE GENERAL CAMERA COMPANY Main Floor, Merchandise Mart
	HERMAN CAMERAS, INC. 6 South La Salle Street
	JACKSON CAMERA, INC. 84-86 East Jackson Boulevard
	POWELL'S CAMERA MART 153 West Randolph Street
	SE KAPS CAMERA MART 3946 North Cicero Avenue
	SHUTAN CAMERA CO. 153 West Washington Street
	SOUTH SHORE CAMERA EXCHANGE 1927 East 71st Street
	WELLS-SMITH CAMERA CO. 15 East Washington Street
	WOLK CAMERA CO. 119 South Dearborn Street
Chicago Heights, Ill.	WATLAND BROTHERS 61 East 16 Street
Chico, Calif.	STAPLES FOTO SHOP 220 Broadway
Cincinnati, Ohio	EASTMAN KODAK STORES, INC. 27 West Fourth Street
Cleveland, Ohio	CAMERA CRAFT, INC. Shaker Square
	THE DODD CO. 1025 Huron Road
	REITMAN CAMERA EXCHANGE 1900 East Ninth Street
College Place, Wash.	ERNEST S. BOOTH 2 miles from Walla Walla

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AMERICA'S MOST DEPENDABLE FINEGRAIN DEVELOPER,

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**PANTHERMIC**

develops film safely and with supremely fine grain at any temperature from 60° to 90°, and, the developer, stop bath, hypo and wash water may be at widely different temperatures one from the other. Thousands of Leicaneers have used 777 since 1938, with consistently good results and complete freedom from temperature troubles.

For your own comfort and peace of mind . . . try it!

HARVEY PHOTOCHEMICALS, INC.  NEWTON, NEW JERSEY, U.S.A.

## QUESTIONS AND ANSWERS

*These questions and answers have appeared most frequently among recent correspondence with Leica Camera owners. Selections of other "teasers" will appear in future issues.*

### How can I make a double exposure?

There are two methods generally employed for making double exposures with the Leica camera. The first method will work with all Leica cameras. The second method will work with most Leica cameras. Some Leicas have such a close tolerance in the shutter release clutch that there is not sufficient clearance for the second method.

Either method will in no way harm or cause damage to the Leica or its shutter mechanisms.

(1) After the first exposure has been taken, the re-wind lever is placed in the re-wind position, and by means of the re-wind knob, the film is re-wound in the camera until the collar surrounding the shutter release button has turned exactly one revolution. (Leica Models Ic, IIc, and IIIc, the collar does not turn, but the release button turns.) For the second exposure, the camera is wound and the shutter speed set in the normal manner.

(2) After the first exposure has been taken in the normal manner, hold the shutter release button down while the top shutter speed dial, without lifting, is turned in a counter-clockwise direction as far as it will go. When this position has been reached and still holding the top shutter speed dial against its tension, remove the finger from the shutter release button. The release button will then rise to its normal position. The hold on the top shutter dial is then released and it may be re-set to any desired speed for the second exposure. The second exposure is made by depressing the shutter release button. This method winds the shutter without advancing the film.

**BROOKS**  
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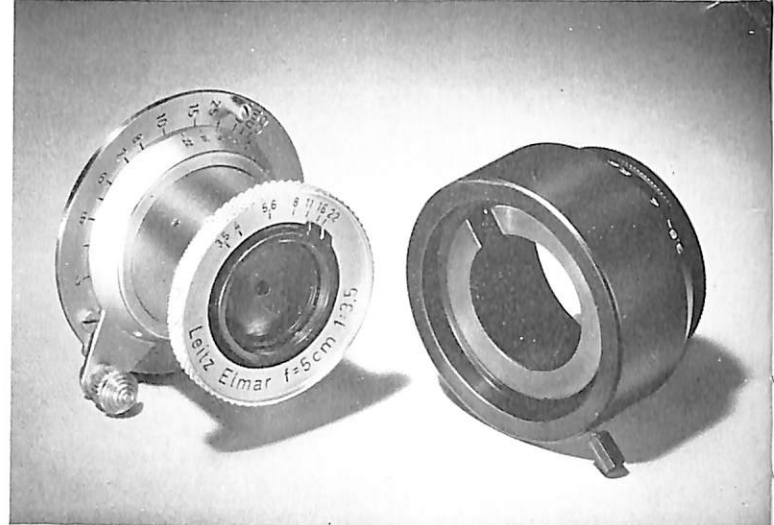
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# Leica NEWS

## ACCESSORIES NOW IN PRODUCTION

The Leitz VIII<sup>s</sup> Projector (No. 75,311) comes complete with slide changer, interchangeable condensers, 400 watt 110 volt projection lamp but without lens. Any Leica Camera lens from 50mm. to 135mm. focal length, may be used at full aperture as a projection lens when screwed into the standard lens flange of the VIII<sup>s</sup>. The Hektor 85mm., F:2.5 coated projection lens is an accessory which come in helical focusing mount and standard screw flange. A second accessory coated lens, the Hektor 120mm. F:2.5, is supplied complete with its own carrier stage: because of its oversize mount it is not interchangeable with the standard lens flange.

The semi-automatic roll film holder accommodates rolls of 35mm. positive film for full Leica-frame pictures: adapter glasses and frames can be supplied for the smaller 18mm. x 24mm. format. ↓



↑ The new VALAU lens ring (No. 72,310) has been re-designed specifically for the Elmar 50mm., F:3.5 coated lens. As this Elmar is the camera lens most frequently used on the Focalslide (for record and macro work) and on the Focomat for enlarging, the VALAU ring offers the convenience of calibrated click-stops and a lens shade—particularly when working at close lens-to-subject distances.



↑ The latest Elmar 90mm., F:4, coated lens (No. 65,671) is now housed in a matt chromium mount with a camera-matching black trim. This new lightweight, long-focus Elmar weighs only 7 ounces: it replaces the previous medium weight chrome plate mounted lens and the black finish heavy weight lens.

← The Hektor 135mm., F:4.5 coated long focus lens is now available in the special short mount, OHEBO, (No. 65,740) for attachment to the Mirror Reflex Housing allowing the Hektor to be focused throughout its normal range. Although the OHEBO may not be used directly on the camera in the usual way, it can be used on the Focalslide for certain set-ups.

Owners of the regular long-focus Hektor 135mm., lenses (of either pre- or post-war manufacture) can obtain the short-mount itself, ZOON, (No. 65,760) on special order from their Leica Franchised Dealer. It is essential for us to know the correct serial number of your present Hektor lens before making the short mount: the complete lens component from the long mount is then interchangeable with the short mount, by the user, for operation on the Mirror Reflex Housing.



# WHERE TO GO . . . FOR LEICA SUPPLIES AND SERVICE

This Directory contains a partial list of LEICA Camera Franchised Dealers, all of whom are fully equipped to offer complete LEICA service and finishing.

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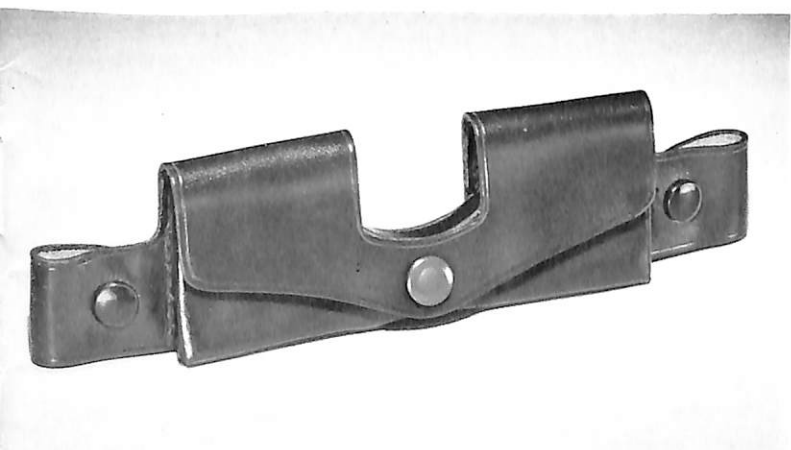
# Leica NEWS

ACCESSORIES NOW IN PRODUCTION

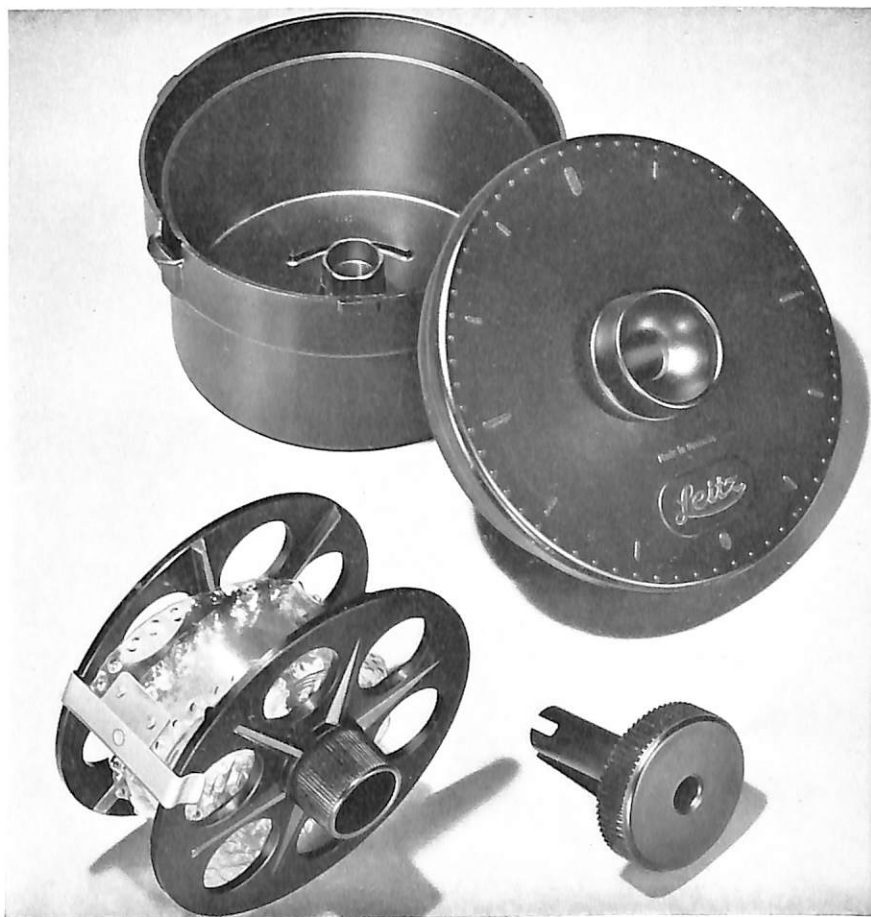
The complete Leitz Correx processing tank is now available (No. 68,450) as shown below. A novel feature molded on the lid of the tank itself is the "clock-face" upon which may be marked with an ordinary wax pencil, any period of developing time up to one hour. ↓



↑ The Summarex 85mm., F:1.5 coated speed lens (No. 65,665) now comes in a streamlined chrome mount, which is lighter in weight than the original black model. The lens diaphragm ring is calibrated with click-stops; twin aperture scales are engraved on opposing sides of the mount for ease of reading.



↑ The hand-made cowhide Eveready Filter Case (No. 68,143) snaps onto the back of the Leica Eveready Camera Case, and accepts any two of the Leitz mounted or unmounted filters.



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## COLOR PHOTOGRAPHS AND THEIR REPRODUCTION

by Douglas A. Spencer

*Continued from page 5*

me. For many years the bulk of my personal photographs have been made with a Leica on 35mm. Kodachrome. I find this method convenient to myself, cheaper and much more popular with my visitors than the old fashioned method of digging out handfuls of unmounted black and white prints from the bureau drawer!

After all, I can, with a minimum of preparation, project for them a rapid succession of five foot, full color enlargements of my holiday pictures and then store them all away again in a tiny filing cabinet.

However convenient the amateur may find such a system, the fact remains that most commercially made color photographs are not regarded as an end in themselves, but as a convenient original from which mass-produced copies on paper for advertisements, catalogues and magazine illustrations will be made.

That is the rub when the original is a 35mm., color transparency, for many graphic arts houses fight shy of the problem of making color printing plates from originals of this size.

Inherently, of course, the job is no more difficult than the making of such plates from larger size transparencies but few process houses are as yet properly equipped for the work. The long established method of making color printing letterpress blocks or litho plates involves a considerable amount of hand work to correct for the departure of the hues of the printing inks from those required by theory and the distortions of tone rendering inherent in conventional methods of working.

Printing-plate makers have built their long-established techniques round these facts and they assume that the color original can be placed direct on the copyboard or transparency holder of their process camera and photographed with their standard equipment. But the degree of enlargement possible in a typical process camera is too small to enable other than very small printing plates to be made from 35mm. originals. However, those progressive firms (perhaps twenty-five per cent of the graphic arts houses in the U.S.A.), who have equipped themselves to carry out most of the color correction by photographic masking rather than manual methods, find that 35mm. originals are no more difficult to reproduce than the larger size transparencies. Those graphic arts houses who have a so-called darkroom type process camera find the magenta masking method the simplest way of reproducing from Leica color originals.

An alternative is to use a precision type enlarger in an ancillary darkroom to produce enlarged separation negatives from the transparency and then, by photographic masking, prepare from these negatives color-corrected

transparencies which are converted into screen negatives in the process camera. Not only does this method enable much of the hand color correction to be eliminated but it frees the process camera for its proper job—the making of screen positives or negatives.

Unfortunately, these modern methods must necessarily make slow headway in the typical process house for they involve breaks with long established traditions of procedure—the substitution of densitometer readings for the skilled judgment of the craftsman and the mechanization of procedures which those bred in the industry have in their bones are not capable of being mechanized. This is, of course, quite understandable. A superlative color reproduction always involves the greatest care and understanding at every stage down the knife edge along which the color reproduction must travel as it makes its way from the photographer's studio through the different technicians' hands to its eventual reproduction on the printed page. One bit of slipshod work at any stage can nullify all the extra efforts given at other stages. Once a graphic arts house has accumulated an experienced team and a familiar routine, it naturally hesitates before introducing radically different techniques—however promising these seem.

However, technically speaking, the last alibi of the "masking is not worth the trouble" school has gone. *At some time in the not-distant future the majority of the necessary color and tone correction will be carried out more or less automatically by photographic methods.* The function of the color fine-etcher will still be an important one, however, for no fully automatic method will give 100% satisfaction and skilled craftsmanship will still be required to add the final polish to the mirror that such mechanized procedures can now hold up to nature.

Plate 1 illustrating this article was reproduced from a 35mm. color transparency by techniques of the type described, while Plates 2 and 3 show direct comparison between the old and the new methods referred to. The original was a 35mm. Kodachrome made with a Leica and Plate 2 shows the result achieved by the normal indirect method in which continuous tone negatives and positives were made in the enlarger and half-tone negatives made from these positives with subsequent manual color etching.

Plate 3 involved exactly the same photographic equipment but here color-correcting photographically-produced masks were bound in register with the separation negatives before the positives were made.

This resulted in a valuable reduction in color fine-etching time and a noticeable gain in the photographic quality and color saturation of the reproduction.

This particular technique, only one of several that could be employed, is described in full in the 1950 edition of *Penrose Annual\** through whose courtesy Plates 2 and 3 are reproduced.

\* Coppin, Hephner, Lee and Wells (*Penrose Annual*, 1950, Volume 44, pp. 88-90).



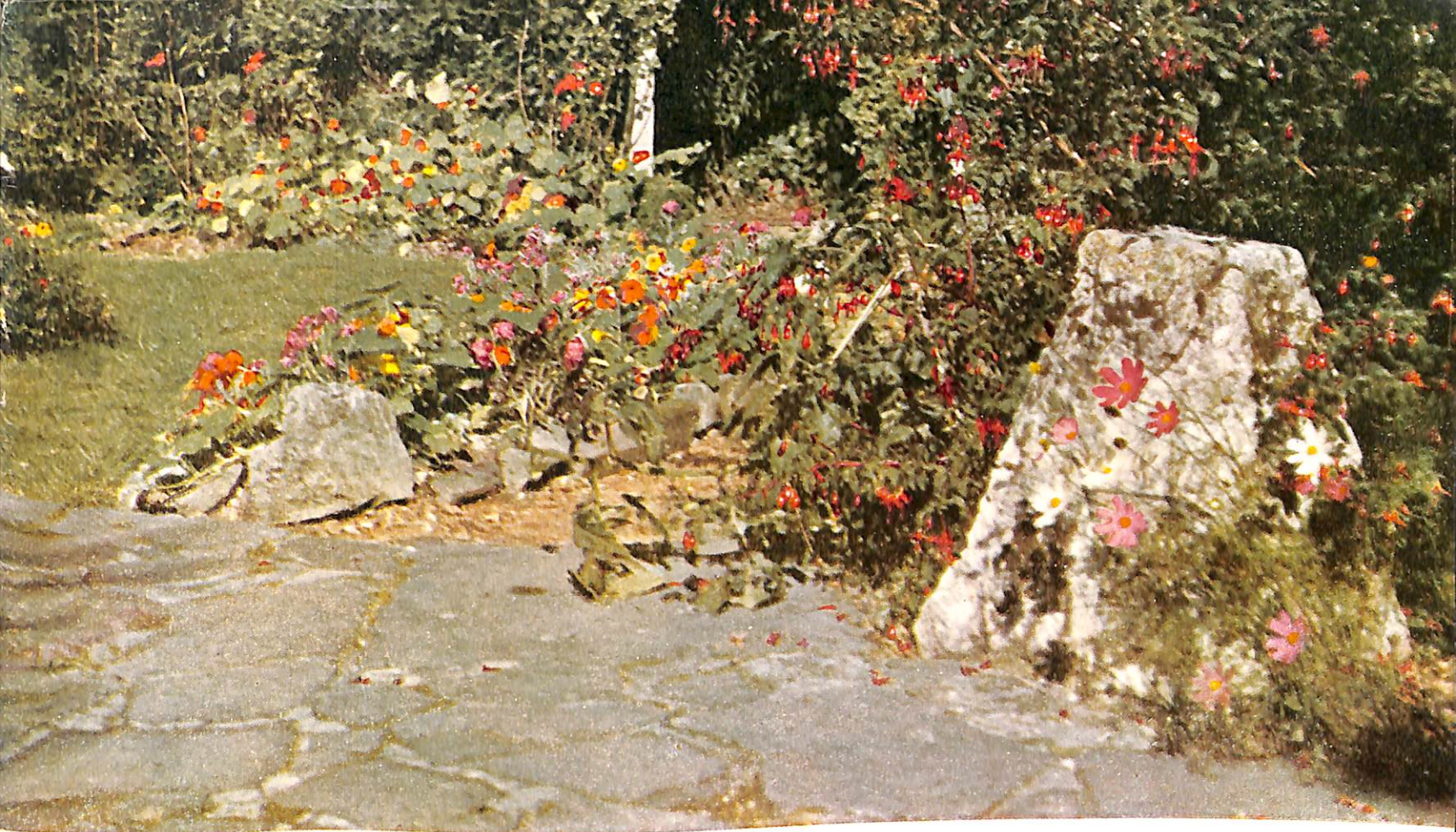


PLATE 2. Made by routine indirect method with manual color etching

PLATE 3. Photographic color-correcting masks have been used: no fine etching





## COLOR PRINTS FROM LEICA TRANSPARENCIES

by Glen Peterson

*Continued from page 7*

Develop for 2 minutes and 10 seconds in DK 60A at 68 degrees F.

Fix, wash and dry. This mask is used for masking the blue filter, yellow printing negative.

These principal masks should match each other when the film steps are compared side by side. They must be as exact as you can make them. If one of them is lighter than the other it will need more exposure. Usually, if a full step on the tablet is missing you can double the exposure. Keep at it until they match. The shadow areas of the transparency should be just vaguely visible in the principal mask, with some rather clear portions. There will be a queer reversal effect in the highlight areas, due to the effect of the highlight mask, but that is as it should be.

### Making Separation Negatives

*To make Red Filter or cyan printing negative:*

Remove all spacer negatives from register board

Expose Super XX film with unclipped principal mask registered on top and covered with glass

Use "F" filter, expose 11 seconds, develop 3 minutes in DK 60A at 68 degrees F

Fix, wash and dry—clip three corners for identification

*To make Green Filter or magenta printing negative:*

Expose Super XX film with unclipped principal mask registered on top and covered with glass

Use "N" filter, expose 12 seconds, develop 3 minutes in DK 60A at 68 degrees F

Fix, wash and dry—clip 2 corners

*To make Blue Filter or yellow printing negative:*

Expose Super XX film with clipped principal mask registered on top and covered with glass

Use "C4" filter, expose 30 seconds, develop 1¾ minutes in DK 60A at 68 degrees F

Fix, wash and dry—clip 1 corner

The reproduction of the film step tablet should match in all three of these negatives. If the blacker (highlight) parts are too light and the lighter (shadow) parts match, it indicates underdevelopment. The remedy is the same, a trifle less exposure and more development. If the highlights match, but the shadow of one is too light, it indicates overdevelopment and underexposure. The remedy is to give more exposure and less development. Keep at it until you get what looks to you like the best possible balanced set of separation negatives. You will save yourself further headaches when you come to printing them.

I recommend the Eastman Dye Transfer process as a very flexible color printing method and I can add little to what Eastman Kodak tells of its proper operation in their well illustrated book. A complete chemical kit is available which contains all essential chemicals and the addition of a few extra accessories will set you up to complete your color print making. The method outlined in this article will give you a very high standard of separation negatives capable of yielding excellent color prints.

Here's hoping that the results you get will be pleasing to you and your friends—and good luck in color with your Leica. THE END

*Bass says:*



*They call me Leica Bass*

I've sold Leicas for use at home  
And for use from Rome to Nome  
I'm LEICA BASS...and from my store  
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Whate'er your LEICA need may be  
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Charles Bass  
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**Bass Camera Co.**  
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### LEICA AND LIFE

On looking through a copy of the November 28th issue of *Life* Magazine the caption "with Leica and spectacles in hand" caught our Leica-minded eye. We read on, and discovered the article concerns itself with the activities of Keld Helmer-Petersen, a young Danish photographer who concentrates on making unusual color photographs of interesting studies in abstract form and line. We also discovered that Mr. Helmer-Petersen uses an *ordinary Leica Camera* in taking his internationally acclaimed photographs. To quote *Life*, "Critics consider his compositions to be extraordinary photographic feats—pictures that are remarkable not for what they depict but for what they are." Our thought on the matter is that, used with imagination, an "ordinary" Leica can produce "extraordinary" work.

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## ON BOOKS by JOHN BROOKS

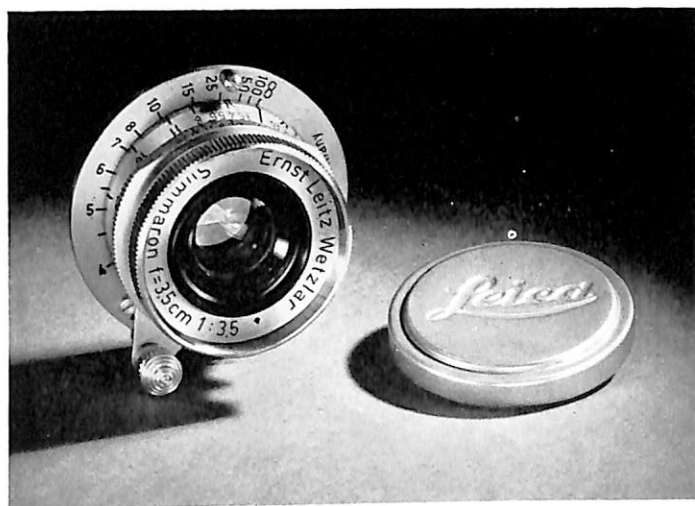
**FEININGER ON PHOTOGRAPHY**, by Andreas Feininger, Ziff-Davis Publishing Company, 409 pages, (\$15.00).

Twenty years of experiments in the field of photography form the basis of this well-written and informative book which is divided into two parts: The Technique of Making a Photograph and The Art of Making a Photograph.

In speaking of the various makes of cameras, Mr. Feininger describes his admiration for, and his early attempts at producing fine photographs with a Leica Camera as follows: "They (Life Photographers) had Leicas—and they got beautiful pictures with these Leicas! I went with Eisenstaedt on a job and didn't he swing a wicked Leica. The pictures he got—every single one a hit! So there I was again, unable to resist the temptation, and for the third time I went and bought myself a Leica—with all the trimmings. Some people only learn the hard way.

"Naturally, it didn't work out this time either. But this time I found the reason: The Leica is too beautiful for me! To me, a Leica is a work of Art, is mechanical perfection personified, is not a means to an end, but the end itself. I could put a Leica on my desk and keep it there as an ornament, I can play around with it and enjoy it like a piece of 'technical jewelry' but I can never treat it casually, as casually as a camera should be treated. I sold this third Leica outfit of mine four months after I had bought it. I wonder when I shall buy my next one. . . ."

## THE NEW WIDE ANGLE SUMMARON 35 mm. F:3.5 COATED LENS



The latest addition to the range of interchangeable lenses supersedes the wide-angle Elmar. The Summaron is of six-element construction and gives superb definition over the whole field: it is fitted with click stops; the diaphragm ring is controlled by a knurled quadrant for ease of operation. Price \$123.20 inclusive of tax.

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Leica Camera color picture by Helen Manzer, A.P.S.A.